


HYDROGEN STORAGE ALLOY

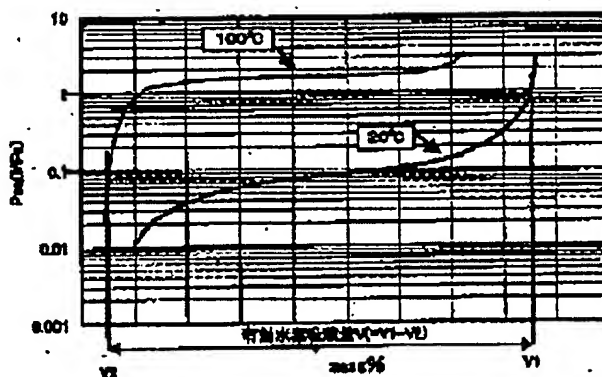
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Inventor: NAKAHATA TAKUJI; MAEDA HISASHI; YONEMURA MITSUHARU
Applicant: SUMITOMO METAL IND LTD
Classification:
- **International:** C22C19/00; F17C11/00; H01M8/04
- **European:**
Application number: JP20000127543 20000427
Priority number(s):

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 JP2001303160 (A)**Abstract of JP2001303160**

PROBLEM TO BE SOLVED: To produce a hydrogen storage alloy lighter and more expensive than the conventional MmNi₅ type hydrogen storage alloy, in which effective hydrogen storage volume V in the ranges of ordinary temperature (about 20 deg.C) to 100 deg.C× atmospheric pressure (0.1 MPa) to 1.0 MPa is higher than 1.3 mass % which is the value of the conventional material and useful for a hydrogen storing vessel feeding the fuel of a hydrogen fuel battery, a heat pump, a heat accumulator, or the like.

SOLUTION: This hydrogen storage alloy has a composition represented by CaAMgBNiCMD; where in, M is at least one kind of element selected from Al, Si, P, Cr, Mn, Fe, Co, Cu and Zn, and $3.0 \leq (C+D)/(A+B) \leq 3.2$, $0.4 \leq B/(A+B) \leq 0.6$, and $0 \leq D/(C+D) \leq 0.2$ are satisfied.



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EC Classification:
Equivalents:

Abstract

PROBLEM TO BE SOLVED: To produce a hydrogen storage alloy lighter and more expensive than the conventional MmNi5 type hydrogen storage alloy, in which effective hydrogen storage volume V in the ranges of ordinary temperature (about 20 deg.C) to 100 deg.C× atmospheric pressure (0.1 MPa) to 1.0 MPa is higher than 1.3 mass % which is the value of the conventional material and useful for a hydrogen storing vessel feeding the fuel of a hydrogen fuel battery, a heat pump, a heat accumulator, or the like.

SOLUTION: This hydrogen storage alloy has a composition represented by CaAMgBNiCMD; where in, M is at least one kind of element selected from Al, Si, P, Cr, Mn, Fe, Co, Cu and Zn, and $3.0 \leq (C+D)/(A+B) \leq 3.2$, $0.4 \leq B/(A+B) \leq 0.6$, and $0 \leq D/(C+D) \leq 0.2$ are satisfied.

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